

CLAIMS

1. A dispensing device comprising a hollow body, a base, and a sidewall to substantially retain a liquid detergent composition until the operation of a wash cycle of an automatic dishwashing appliance; said hollow body having at least one opening to allow the introduction of said liquid detergent composition into said dispensing device; said dispensing device is liquid-permeable.
2. A liquid-permeable dispensing device according to Claim 1 wherein said device further comprises a holding element for attaching said device substantially vertical in the upright position in the interior of said appliance such that said device is capable of retaining a unit dose of said liquid detergent composition.
3. A liquid-permeable dispensing device according to Claim 1 wherein said device comprises at least one orifice; wherein said at least one orifice is located anywhere on said sidewall and/or said base.
4. A liquid-permeable dispensing device according to Claim 3 wherein the dimensions of said at least one orifice are provided so that a unit dose of said liquid detergent composition will not substantially escape through said at least one orifice when said liquid detergent composition is placed in said device for between from about one minute to about twenty-four hours prior to operation of said appliance so that at least about 50%, by weight, of said liquid detergent composition is retained in said device after filling.
5. A liquid-permeable dispensing device according to Claim 4 wherein said dimensions of said at least one orifice are provided so that said liquid detergent composition will not substantially escape through said at least one orifice after filling for between from about one minute to about four hours prior to operation of said appliance.
6. A liquid-permeable dispensing device according to Claim 5 wherein said dimensions of said at least one orifice are provided so that said liquid detergent composition will not substantially escape through said at least one orifice after filling for between from about one minute to about one hour prior to operation of said appliance.

7. A liquid-permeable dispensing device according to Claim 3 wherein said at least one orifice may be in any shape that is effective in allowing water to enter and/or exit said device for the purpose of substantially dissolving and releasing said liquid detergent composition during said wash cycle of said appliance so that less than about 10%, by weight, of said liquid detergent composition is retained in said device as residue after said wash cycle.
8. A liquid-permeable dispensing device according to Claim 7 wherein said at least one orifice comprises a shape selected from the group consisting of a trapezoid, square, ellipse, rectangular, circle, and combinations thereof.
9. A liquid-permeable dispensing device according to Claim 8 wherein said at least one orifice is square or rectangular having a shape with dimensions between from about 0.5 mm to about 10 mm in width and from about 0.5 mm to about the full length of said sidewall in length.
10. A liquid-permeable dispensing device according to Claim 1 wherein said liquid detergent composition does not substantially escape during the prewash cycle of said appliance so that at least about 50%, by weight, of said liquid detergent composition is retained in said device prior to said wash cycle when said device is filled to the unit dose fill line; wherein said liquid detergent composition is dissolved and substantially released from said device so that at least about 50%, by weight, of said liquid detergent composition is dispensed during said wash cycle; and wherein said device is substantially free of residue from said liquid detergent composition so that less than about 10% of said liquid detergent composition remains in said device upon completion of said wash cycle.
11. A liquid-permeable dispensing device according to Claim 1 wherein said base is closed, and wherein said sidewall is substantially perpendicular to said base; and wherein said at least one opening is substantially opposite to said base.
12. A liquid-permeable dispensing device according to Claim 1 wherein said hollow body comprises a rigid structure capable of holding said liquid detergent composition while resisting the forces of the washing environment inside said appliance.

13. A liquid-permeable dispensing device according to Claim 2, wherein said holding element is attached to and extends along a portion of said sidewall.

14. A liquid-permeable dispensing device according to Claim 13, wherein said holding element is in the form of a hook comprising at least one proximal leg attached to at least one distal leg, wherein said proximal leg is attached to and extends from said sidewall.

15. A liquid-permeable dispensing device according to Claim 1 wherein said liquid-permeable device further comprises a securing element which prevents said device from being detached and/or disengaged during the operation of said appliance.

16. A liquid-permeable dispensing device according to Claim 16, wherein said securing element is an integral part of a component of said device, said component is selected from the group consisting of said base, sidewall, holding element, and combinations thereof.

17. A liquid-permeable dispensing device according to Claim 16, wherein said securing element extends outward from the face of said component; and wherein said securing element is in the form of a clip comprising an arm selected from the group consisting of straight, inclined, curved, and combinations thereof.

18. A liquid-permeable dispensing device according to Claim 1, wherein said device is formed of an injection molded synthetic plastics material.

19. A liquid-permeable dispensing device for use in an automatic dishwashing appliance comprising:

- (a) a filling means to allow a liquid detergent composition to be placed in said device;
- (b) a dispensing means to allow water to enter and exit, to dissolve said liquid detergent composition, and to deliver said dissolved liquid detergent composition during the wash cycle of said appliance instead of during the prewash cycle;
- (c) an attaching means to hold said dispensing device upright so that it stands substantially vertical when placed inside said appliance;

- (d) optionally, a securing means to restrain the dispensing device so that it is not overturned or does not become disengaged prior to and/or during operation of said appliance; and
- (e) combinations thereof.

20. A method of treating dishware comprising the steps of:

- (a) providing a liquid-permeable dispensing device for use in an automatic dishwashing appliance comprising a hollow body, a base, a sidewall, a holding element, and optionally a securing element, said hollow body having at least one opening, said sidewall and/or said base having at least one orifice; said device capable of dispensing a dissolved liquid detergent composition into said appliance during the wash cycle;
- (b) placing, attaching and optionally securing said device into said interior of said appliance;
- (c) adding to said device a unit dose of said liquid detergent composition by filling said device to the unit dose fill line; and
- (d) treating said dishware during the wash cycle of said automatic dishwashing appliance.

21. A kit for an automatic dishwashing appliance comprising:

- (a) a package;
- (b) a liquid-permeable dispensing device comprising a hollow body, said hollow body having
 - (i) at least one opening to allow the introduction of said liquid detergent composition into said liquid-permeable dispensing device,
 - (ii) a liquid-permeable sidewall to allow said dissolved liquid detergent composition to exit said liquid-permeable device, and
 - (iii) a base;
- (c) optionally a replacement liquid-permeable dispensing device;
- (d) optionally a product comprising a liquid detergent composition for dispensing, said product being contained in a pouch, bottle, or other suitable container; and
- (e) information in association with said package comprising instructions on how to
 - (i) fill a liquid-permeable dispensing device with said optional product;

- (ii) insert a liquid-permeable dispensing device into the appliance;
- (iii) remove a liquid-permeable dispensing device from the appliance; and
- (iv) combinations thereof;

wherein said device optionally further comprises a means selected from the group consisting of a filling means, a dispensing means, an attaching means, securing means, and combinations thereof.